

DMS935E2

Silicon NPN epitaxial planar type (Tr)
Silicon epitaxial planar type (CCD load device)

For CCD output circuits

■ Features

- Two elements incorporated into one package (Tr + CCD load device)
- High transition frequency f_T
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Basic Part Number

DSC2G03 + CCD load device (Individual)

■ Packaging

Embossed type (Thermo-compression sealing): 8000 pcs / reel (standard)

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | | Symbol | Rating | Unit |
|-----------------|---------------------------------------|-----------|-------------|------------------|
| Tr1 | Collector-base voltage (Emitter open) | V_{CBO} | 30 | V |
| | Collector-emitter voltage (Base open) | V_{CEO} | 20 | V |
| | Emitter-base voltage (Collector open) | V_{EBO} | 3 | V |
| | Collector current | I_C | 50 | mA |
| CCD load device | Limiting element voltage | V_{max} | 40 | V |
| | Limiting element current | I_{max} | 10 | mA |
| Overall | Total power dissipation * | P_T | 125 | mW |
| | Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| | Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Note) *: Measuring on substrate at 17 mm × 10 mm × 1 mm

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

- Tr1

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---------------------------------------|-----------|--|-----|------|-----|------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = 100 \mu\text{A}, I_E = 0$ | 30 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 10 \mu\text{A}, I_C = 0$ | 3 | | | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = 10 \text{V}, I_C = 2 \text{mA}$ | | 750 | | mV |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 10 \text{V}, I_C = 2 \text{mA}$ | 100 | | 250 | — |
| Transition frequency | f_T | $V_{CE} = 10 \text{V}, I_C = 15 \text{mA}$ | | 1300 | | MHz |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Pulse measurement

- CCD load device

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--------------------|--------|--------------------------------|-----|------|-----|-------------|
| Pinchi off current | I_P | $V_{DS} = 8 \text{V}, V_G = 0$ | 5.0 | | 7.0 | mA |
| Output impedance | Z_O | $V_{DS} = 8 \text{V}, V_G = 0$ | | 0.02 | | $\mu\Omega$ |

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

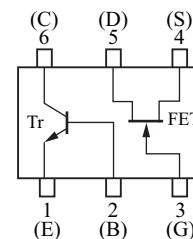
■ Package

- Code
SSMini6-F3-B
- Pin Name

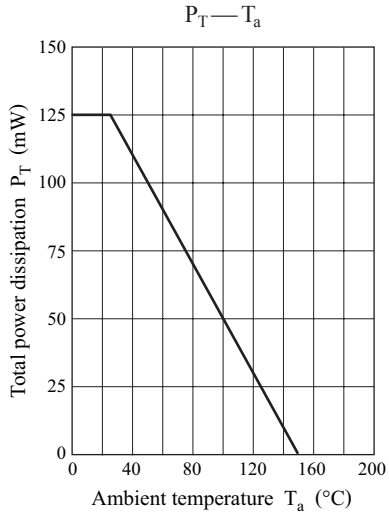
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|------------|--------------|
| 1: Emitter | 4: Source |
| 2: Base | 5: Drain |
| 3: Gate | 6: Collector |

■ Marking Symbol: X1

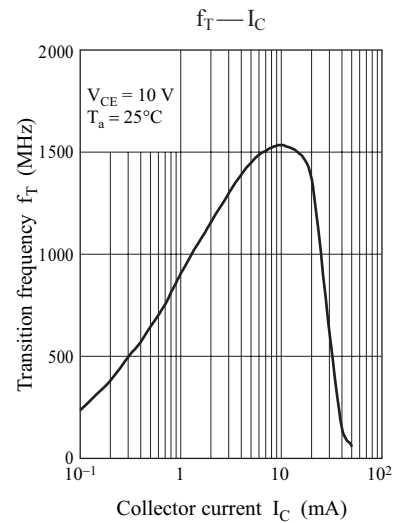
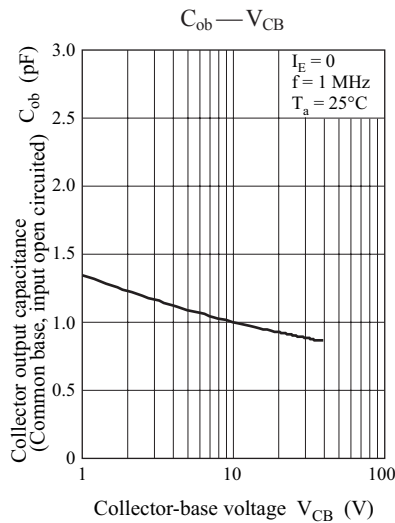
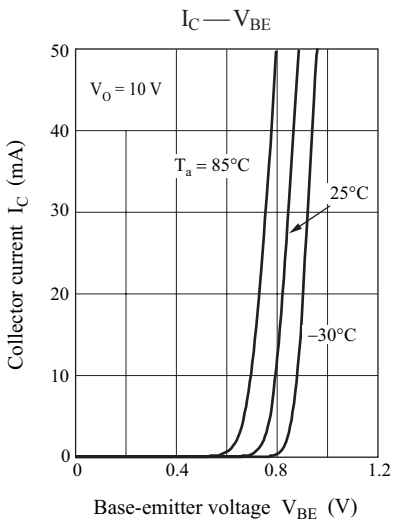
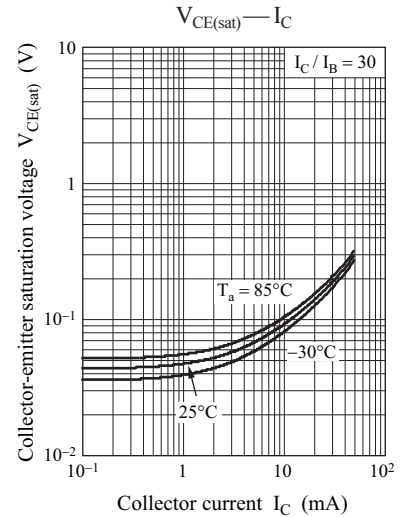
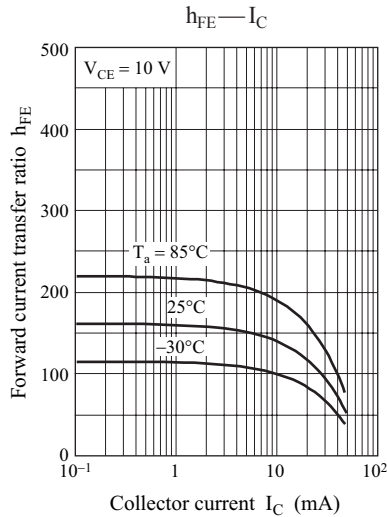
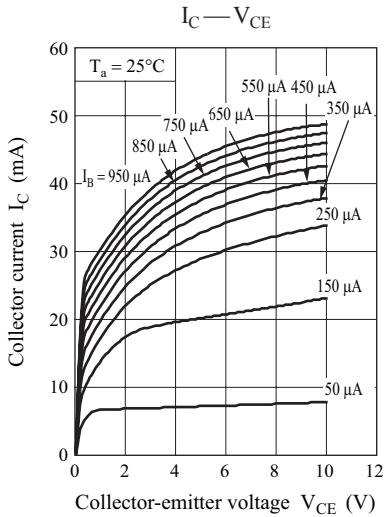
■ Internal Connection



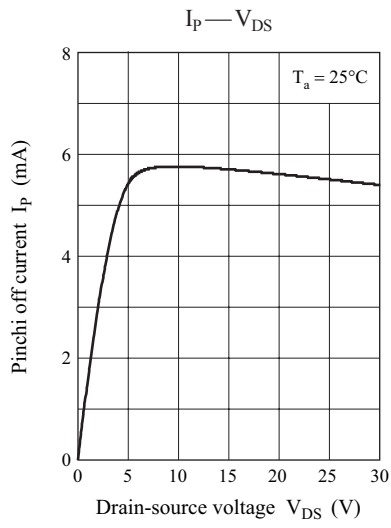
Common characteristics chart



Characteristics charts of Tr

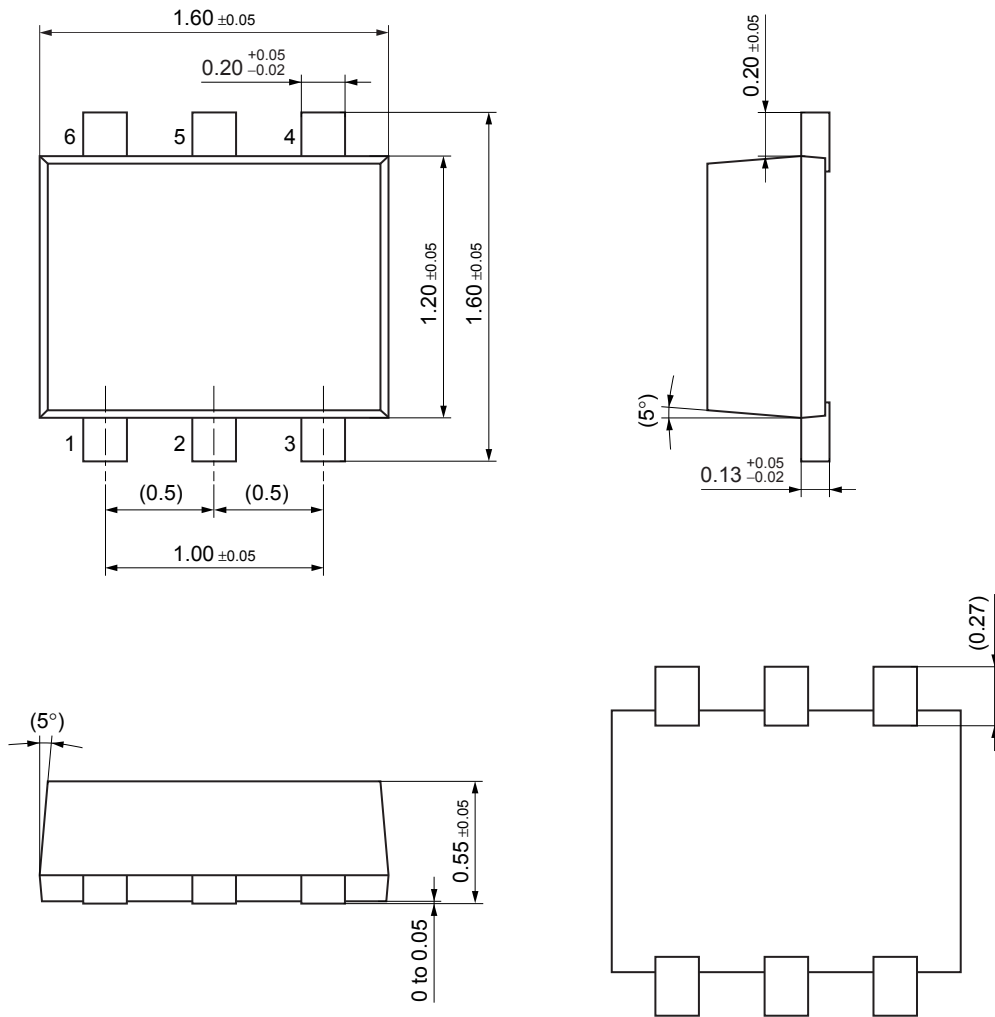


Characteristics charts of CCD



SSMini6-F3-B

Unit: mm



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